

Remarks

Claims 15-21 are pending in the application. Claims 1-5 and 10-14 have been cancelled. Claims 6-9 have been cancelled in the previous amendment. Claims 17-21 are new. Amendments to the claims and support for the new claims are as follow:

| Claim number | Support |
|--------------|---|
| 15 | Claims 2 and 15 + par. [0023] and [0045] + Tables 4 and 5 |
| 16 | Claims 2 and 16 + par. [0023] and [0045] + Tables 4 and 5 |
| 17 | Former claim 3 |
| 18 | Former claim 10 |
| 19 | Former claim 11 |
| 20 | Former claim 13 |
| 21 | par. [0047] |

Claim Rejections – 35 USC § 102

Claims 1, 2, 4, 5, 10-12 and 14-16 have been rejected by the examiner as allegedly being anticipated by Hoogstad. In response to this rejection, independent claim 15 has been amended as a method for obtaining “*a catechin fraction having a higher concentration of epigallocatechin gallate than a concentration of epigallocatechin*”, and independent claim 16 has been amended as a method for obtaining “*a first catechin fraction enriched in epigallocatechin and a second catechin fraction enriched in epigallocatechin gallate, the second catechin fraction having a higher concentration of epigallocatechin gallate than a concentration of epigallocatechin*”. Support for both these amendments can be found in paragraph [0045], as well as in tables 4 and 5, of the present application.

Hoogstad discloses a process for the preparation of a concentrated tea extract, during which process a two stage extraction step is followed by a two stage concentration step. For this purpose, Hoogstad requires that the two extracts or concentrates obtained by his process be combined at the end of the process, in order to obtain the desired concentrated tea extract. This essential step is clearly stated all through the description, such as in column 1, line 66

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(“...combining said first and second (concentrates)...”); and in column 2, lines 38-39 (“after concentration, the two concentrated fractions are combined.”), and lines 64-66 (“the two concentrated extracts are mixed and subsequently frozen and freeze-dried”). Hoogstad justifies the necessity of having a two stage extraction step for avoiding the usual loss of tea extract quality resulting from conventional concentration processes. Hoogstad never considered or suggested specifically extracting or obtaining a tea extract fraction enriched in a specific type of catechin, such as in the present application. It is therefore submitted that the claims of the instant application are novel over the reference by Hoogstad. Removal of claim rejection under 35 USC § 102 is therefore respectfully requested.

Claim Rejections – 35 USC § 103

Claim 1, 4 and 10-16 have been rejected by the Examiner as allegedly being obvious over Baraldi. Reconsideration of the rejection is respectfully requested based on the following amendments and arguments.

First of all, independent claims 15 and 16 have been amended to recite “*catechin fraction having a higher concentration of epigallocatechin gallate than a concentration of epigallocatechin*” as presented herein above, and to modify the temperature of the first and second extraction to “*between 20 and 60°C*” and “*between 70 and 90°C*” respectively, based on the support found on paragraph [0023]. The term “plant product” has also be amended to “tea leaf”, based on the support of claim 2.

Regarding the alleged obviousness of claims 1, 4 and 10-16 over Baraldi, the Applicant would like to point out that the carob tree used by Baraldi does not contain concentrations of EGC comparable with the concentration found in tea leaves. This is demonstrated in table 1 of Baraldi, where two infusions of 15 minutes each only extracted 0.06mg/g of EGC from the carob meal, and 0 mg/g of EGC from the carob leaves. By opposition, EGC is shown to be the major catechin present in tea leaves, as exemplified in table 5 of the present application. It is therefore submitted that the skilled man in the art, seeking to obtain an EGCG-enriched fraction from tea leaves, would not find any directions or

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motivation in a reference addressing a plant (i.e. carob tree) having a completely different catechin profile than tea leaves, as the Baraldi reference.

In addition, it is submitted that Baraldi, similarly to Hoogstad, also teaches combining the two extracts (see paragraphs 0014 and 0015) for the purpose of obtaining a single concentrated extract. Since tea leaves contain high levels of EGC (cf. table 5), it is submitted that the skilled worker would easily foresee the necessity to extract EGCG differentially from EGC. However, such differential extraction of specific catechins is neither disclosed nor suggested in Baraldi. By opposition, Baraldi rather teaches the combination of all extracts obtained from the extraction steps into one single extract or concentrate.

Moreover, Baraldi describes its second extraction step as being performed according to the same conditions as the first extraction (par. 0015: "*A second aqueous extract is obtained repeating the procedure on the centrifugation residue.*"), an approach that does not allow the differential extraction of specific catechins. By direct contrast, the present application teaches a first extraction step performed at a temperature of between 20 and 60°C, followed by a second extraction step performed at a temperature of between 70 and 90°C.

While the Examiner alleges that Baraldi is using a broad language that "*is not limited to the use of the same temperature in both extractions*", the Examiner concedes that there is a reference to using the same conditions for both extractions in paragraph 0015. In addition, the Applicant would like to point that the wording of claim 5, step e), is also suggesting that the same conditions are used for both the extraction steps ("*e) optionally repeating steps a)-d) on the centrifugation residue from step b)*"). While the Applicant agrees that Baraldi never clearly states that the same temperature should be used for both extraction steps, he never states or even suggest otherwise neither. Moreover, by stating twice that the second extraction step is a repetition of the first extraction step (paragraph 0015 and claim 5), it is submitted that he is leading the skilled man to the art in understand that the temperature is the same for both steps. Considering that the temperature difference between the first and second extraction steps of the present application is allowing for the differential extraction of EGC and EGCG, it is respectfully submitted that Baraldi can not render obvious the methods of the present application by disclosing a two stage process performed in the exact same conditions.

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Therefore, for the reasons stated above, it is respectfully requested that the claims are not obvious over the reference by Baraldi.

Claims 3 and 13 have been rejected by the Examiner as allegedly being obvious over Hoogstad. As submitted hereinabove, Hoogstad teaches a process for preparing a concentrated tea extract without losing the quality of the extracts, during which process the two extracts are to be combined. Hoogstad is qualifying its two extracts exclusively on their concentration of solids (cf. column 2, lines 26-32):

"The solids content of the first extract prior to concentration is preferably 1-6%, the solids content of the second extract 1-6%.

The concentration of the first extract is preferably carried out until the solids content is increased to 15-25%; the solids content of the second extract after concentration is also preferred to be from 15 to 25%"

Hoogstad never address the concentration or proportions of catechins. In fact, Hoogstad never even mentions the presence of catechins in his reference. Therefore, it is submitted that the skilled man in the art, looking for a solution addressing the problem of the present application, i.e. obtaining a fraction enriched in a specific type of catechin, would not find any guidance, suggestion or motivation from the reference by Hoogstad. For this reason, removal of the rejection of claims 3 and 13 as allegedly being obvious over Hoogstad is therefore respectfully requested.

No new matter has been introduced by way of the present amendment.

It is therefore submitted that the claims are in condition for allowance. Reconsideration of the examiner rejection is respectfully requested, and allowance of claims 16-22 on the merits and at an early date is earnestly solicited.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be expedited.

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No additional fees are believed to be required by the present response. However, should this be an error, the Commissioner is further authorized to charge any additional fees which may be required for underpayment, or to credit any overpayment, to Deposit Account # 19-5113.

Respectfully,

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